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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/754,572	01/12/2004	Mun-Pyo Hong	8071-121T (OPP031985US)	8242
7590 05/17/2006			EXAMINER	
F. Chau & Associates, LLC 130 Woodbury Road Woodbury, NY 11797			FENTY, JESSE A	
			ART UNIT	PAPER NUMBER
			2815	

DATE MAILED: 05/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/754,572

Applicant(s)

HONG ET AL.

Examiner

Jesse A. Fenty

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10, 14, 15, 45-51 and 54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 45-50 is/are allowed.
- 6) ☒ Claim(s) 10, 14, 15, 51 and 54 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Allowable Subject Matter

The indicated allowability of claims 12 and 53 is withdrawn in view of the newly discovered reference(s) to Seo (U.S. Patent No. 6,323,521). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 10, 15, 51 and 54 are rejected under 35 U.S.C. 102(e) as being anticipated by Seo (U.S. Patent No. 6,323,521 B1).

In re claim 10, Seo (e.g., Fig. 5D) discloses a semiconductor device comprising:

a wire (113) of a conductive material on a substrate, wherein the wire is made of a conductive material including aluminum-based material (column 4, lines 7-9);

an inter-layer reaction layer (121) formed on the wire and including at least silicon, wherein the inter-layer reaction layer includes Al-Si (column 4, lines 26-31); and a conductive layer (133) electrically connected to the wire via the inter-reaction layer.

In re claim 15, Seo discloses the device of claim 10, further comprising an insulating layer (129) having a contact hole exposing the inter-layer reaction layer between the wire and the conductive layer.

In re claim 51, Seo (e.g., Fig. 5D) discloses a semiconductor device, comprising: a first wire (113) formed of a conductive material, wherein the first wire contains aluminum;

a second wire formed on and in (electrical or ohmic) contact with the first wire, the second wire comprising:

a first conductive layer (133) formed of a conductive material; and a second conductive layer (121) sandwiched between the first wire and the first conductive layer and containing silicon,

wherein the first conductive layer is electrically connected to the first wire via the second conductive layer, and the second conductive layer contains AlSi (column 4, lines 26-31)

In re claim 54, Seo discloses the device of claim 51, wherein the first conductive layer is formed of a transparent conductive material.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Seo as applied to claim 10 above, and further in view of Colgan et al. (U.S. Patent No. 6,278,502 B1).

In re claim 14, Seo discloses the device of claim 10, wherein the conductive layer is made of a conductive material of indium tin oxide, but does not expressly disclose the alternative layer, indium zinc oxide. The interchangeability of indium tin oxide and indium zinc oxide is well known in this art, as is disclosed by the disclosure of Colgan. It would have been obvious to one of ordinary skill in the art at the time of the invention to use indium zinc oxide as disclosed by Colgan for the conductive layer of Seo for the purpose, for example, of providing a transparent layer over the pixel region (see Colgan, column 5, lines 1-2).

Allowable Subject Matter

Claims 45-50 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: The semiconductor device structure comprising at least a passivation layer

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covering the data wire and an inter-layer reaction layer formed on the gate and the data wire is neither anticipated nor obvious over the prior art of record.

Response to Arguments

Applicant's arguments with respect to claims 10, 11, 13-15, 51, 53 and 54 have been considered but are moot in view of the new ground(s) of rejection.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jesse A. Fenty whose telephone number is 571-272-1729. The examiner can normally be reached on M-F 5/4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ken Parker can be reached on 571-272-2298. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JAF



KENNETH PARKER
SUPERVISORY PATENT EXAMINER